ABSTRACT

CLINICAL PROFILE OF INGUINAL HERNIA IN INFANTS

INTRODUCTION

Inguinoscrotal swellings are one of the commonest surgical problems in infancy and childhood throughout the world. Among the inguinoscrotalswellings, inguinal hernia tops the list in frequency. They represent the conditions frequently requiring surgical repair in the pediatric age group. Hernia is a Latin term meaning rupture of a portion of a structure. It can be defined as a "protrusion of a viscus or part of a viscus through a normal or an abnormalopening in the wall of its containing cavity." Refinements in neonatal intensivecare have increased the number of surviving premature and very low birthweight infants and consequently the incidence of neonatal inguinal hernia is increasing.

The inguinal hernia is the commonest defect the paediatric surgeon performs surgery on and is usually indirect. It is believed that these herniasrarely go away, and therefore; virtually all should be repaired. Several issues arecontentious, such as optimal time of herniotomy after diagnosis, obstruction, feed intolerance, the role of contralateral exploration and for the premature group; issues are type of anaesthesia and need for post-operative mechanical ventilation support.1, There is very limited study in India analysing theincidence of hernia and the risk factors associated with the incidence, likegestational age, birth weight, positive pressure ventilation, post2 operativecomplications and so on. This study is designed to look into the incidence of hernia in infants with an analysis of the risk factors involved in the occurrence of inguinal hernia in them like age, sex, sidedness, gestational age at birth , birth weight, age at the time of occurrence of hernia, use of positivepressure ventilation, reducibility, time of repair, urgency of repair(done as anemergency or elective procedure), complications due to the hernia and post operatively.

STUDY JUSTIFICATION:

Studies suggest that inginal hernia is a common condition requiringsurgical repair in the paediatric age group.The incidence of inguinal hernias isapproximately 3% to 5%in term infants and 13% in infants born at less than 33weeks of gestational age1. Increased survival of preterm and low birth weightinfants due to better intensive care and has resulted in increased incidence ofhernia in infancy. There is also limited data available from India in

assessing therisk factors involved in the occurrence of inguinal hernia and the pre and postoperative complications associated with it. This study may help us in predictingthe factors associated with increased incidence of hernia in infants.

AIM

To study the clinical profile ie the incidence and risk factors of inguinalhernia in children less than 1 year of age.

METHODOLOGY

This study is based on retrospective collection of data for a period of 3years from the records library at PSGIMSR and prospective follow up ofpatients who are getting admitted at paediatric or paediatric surgery departmentin a tertiary care centre(PSGIMSR) for inguinal hernia; for 2 years andcollection of data from them and retrospectively analysing it for the differentrisk factors involved in the incidence of inguinal hernia in infants less than 1year of age and also to look into the complications that occur in them postoperatively.

STUDY DESIGN:

It is a retrospective& prospective observational study.

INCLUSION CRITERIA:

All inguinal hernia cases that are seen as op / getting admitted as a case ofinguinal hernia < 1 year of age in Paediatrics and Paediatric Surgery departments at PSGIMSR < 1 year of age, for surgical intervention.

EXCLUSION CRITERIA :NIL

STUDY PERIOD: From 01/01/2012 to 31/12/2016 (5 Years)

OBSERVATION & RESULTS

A total of 78 infants less than 1 year of age who underwent surgery for inguinal hernia at the paediatric surgery department during a period of 5 years from 1st January 2012 to 31st December 2016 were included in the study. Data was analysed from the files for the associated risk factors that might have predisposed for the occurrence of hernia. They were followed up immediate post operatively for need of ventilation & for a period of 6 months for occurrence of wound infection, recurrence or any other complication at the surgical site or the

testis or underlying structuresIn the study group of 78 individuals, 50(64.1 %) were males and 28 (35.9 %) were females .Gestational age was classified as preterm (<34 weeks) , late preterm (34 0/7-36 6/7weeks) & term(>37 weeks) infants. Of 78 individuals , 44 % were preterm , 5 % were late preterm & 51 % were term individuals. , 42 % of the babies received care in NICU where as 58 % did not. Total parenteral nutrition (TPN) was provided for 17 % of the babies at NICU whereas 83 % of the babies did not receive TPN. 10 % developed abdominal distention, 22 % required ventillatory / continuous positive airway pressure support (CPAP) during the hospital stay while 78 % did not receive any respiratory support, 6 % presented with obstructed hernia whereas 94 % had no obstruction at presetntation. Regarding the prevalence of sidedness , 28 % presented with bilateral inguinal hernia , 40 % with left sided hernia & 32 % with right sided hernia.10 % of the inguinal hernias were irreducible at presentation while 90 % were reducible.None (0 %) of the hernia sac contents were incarcerated / gangrenous at presentation.96 % of the hernias were electively operated upon whereas only 4% required emergency intervention.Bilateral herniotomy was done in 77 % of the cases and the rest (23%)required only unilateral intervention.17 % of the cases required post-operative ventilation. None of the 78 cases had immediate post operative complications None of the 78 cases had post-operative wound infection / recurrence of hernia .There was no testicular atrophy in any of the post op cases during long term follow up. There were no associated hydrocele in any of the cases during presentation. There were no cases of occurrence of contralateral hernia during the follow up period.

CONCLUSION

1. Incidence of inguinal hernia is higher in boys compared to girl babies
2. Gestational age wise , preterm infants were at higher risk of having inguinal hernia when compared to term infants.
3. Babies with prolonged NICU care , receipt of ventilator support along with total parenteral nutrition were found out to be having higher incidence of inguinal hernia.
4. Bilateral hernia was more common and right sided were more common when compared to left.
5. Postoperative ventilation was required in preterm infants and duringfollow up it was found that there was no recurrence of hernia orassociated wound infection / testicular atrophy nor there was any recurrence on the opposite side hernia in those cases in which unilateral herniotomy was done.

LIMITATION

Small sample size was a major drawback of our study. Duration of followup of the cases were short to analyse for the recurrence of hernia or foranalysis of long term complications. There were relatively less number ofsubjects with extremely low birth weight and preterm infants category.Hence the prolonged NICU care and the risks factors associated with herniain such cases could not be analysed properly.

Keywords: Inguinal Hernia Mechanical Ventilation Support, Parenteral Nutrition